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Notice of Allowability

Application No.

10/527,248

Examiner

Ching Chang

Applicant(s)

SAKURAI, MOTOKI

Art Unit

3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/06/2006.
2. ☒ The allowed claim(s) is/are 11-62.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

This Office Action is in response to the amendment filed on 12/06/2006.

Reasons For Allowance

1. The following is an examiner's statement of reasons for allowance:

Regarding claim 11, the claimed combination including the limitations directed to the specifics of an engine valve gear comprising: a first rocker arm swingably supported on a first rocker shaft and having a roller bearing at one end thereof, wherein when the roller bearing of the first rocker arm contacts with the base circle of a first valve gear cam of a camshaft, the first rocker shaft is located closer to the camshaft than a location of a center of rotation of the roller bearing of the first rocker arm, is not disclosed or rendered obvious the art of record.

Regarding claim 24, the claimed combination including the limitations directed to the specifics of an engine valve gear comprising: a first rocker arm swingably supported on a first rocker shaft and having a roller bearing at one end thereof, wherein the first rocker arm and the first valve gear cam are arranged in a relationship between relative positions of a center of the first rocker shaft, a center of rotation of the roller bearing of the first rocker arm, and a center of rotation of the camshaft is such that the first rocker arm does not buckle when the cam nose of the first valve gear cam contacts with the roller bearing of the first rocker arm to cause the first rocker arm to swing in a valve opening direction, is not disclosed or rendered obvious the art of record.

Regarding claim 38, the claimed combination including the limitations directed to the specifics of an engine valve gear comprising: a first rocker arm swingably supported

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on a first rocker shaft and having a roller bearing at one end thereof, wherein a force exerted on a contact portion at which the cam nose and the roller bearing of the first rocker arm contact each other does not act along a line which connects a center of rotation of the roller bearing of the first rocker shaft and a center of the first rocker shaft, is not disclosed or rendered obvious the art of record.

Regarding claim 50, the claimed combination including the limitations directed to the specifics of an engine valve gear comprising: a first rocker arm swingably supported on a first rocker shaft and having a roller bearing at one end thereof, wherein an intersecting angle θ_1 between a line which connects the center of the first rocker shaft and the center of rotation of the roller bearing of the first rocker arm, and a line which connects a center of rotation of the camshaft and the center of rotation of the roller bearing of the first rocker arm; and θ_1 is larger than approximately 90 degrees, is not disclosed or rendered obvious the art of record.

Regarding claim 61, the claimed combination including the limitations directed to the specifics of a four-cycle engine comprising: a first rocker arm swingably supported on a first rocker shaft and having a roller bearing at one end thereof, wherein when the roller bearing of the first rocker arm contacts with the base circle of a first valve gear cam of a camshaft, the first rocker shaft is located closer to the camshaft than a location of a center of rotation of the roller bearing of the first rocker arm, is not disclosed or rendered obvious the art of record.

2. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ching Chang whose telephone number is (571)272-4857. The examiner can normally be reached on M-Th, 7:00 AM -5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571)272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Patent Examiner


Ching Chang